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ABSTRACT

Although previous research indicates that self-concept scores of elderly people are higher than both test norms and scores for younger groups, some researchers have hypothesized that the higher self-concept scores are the result of denial and are not an indication of true self-concept. To investigate the consistency of higher test scores across different self-report measures and to examine higher scores as indicators of denial versus a coping style, older adults, aged 65 to 90, were given an extensive test battery which included measures of psychological, social, and physiological functioning. The sample was divided into a high and a low defensive group by a median split on the Defensive Positive (DP) scale of the Tennessee Self-Concept Scale (TSCS). T-tests were computed between the groups on self-report measures and measures of behavioral performance. Results for the self-report measures and subscales of the TSCS supported the hypothesis of a positive response tendency for the high DP group. Results for the behavioral performance measures and subscales of the TSCS did not support the hypothesis that the response tendency was motivated by denial. The findings suggest that the favorable response tendency indicates use of specific coping strategies which may increase adjustment. (Author/JAC)

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Elevated Self-Concept in the Elderly: Denial or Coping Strategy?

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Abstract

Previous research has consistently indicated that mean self-concept scores of elderly people are higher than both test norms and scores for younger groups. However, other research has suggested that elderly persons use denial as a defense mechanism against the realities of old age. These findings have led some reserarchers to hypothesize that the higher self-concept scores are the result of denial and are not an indication of true self-concept. However, others have hypothesized that the higher scores represent a coping style rather than a defense mechanism. This study investigated the issues of: (1) the consistency of higher test scores across different self-report measures and (2) higher scores as indicators of denial vs. a coping style. Research participants (N = 31) ranged in age from 65 to 90 (M = 73.45, SD = 6.84). They had no major health problems and provided for all their own care. Participants were given an extensive test battery which included measures of psychological, social, and physiological functioning. The sample was divided into a high and a low defensive group by a median split on the Defensive Positive (DP) scale of the Tennessee Self-Concept scale (TSCS). T-tests were computed between the groups on self-report measures and measures of behavioral performance. Results for the self-report measures and subscales of the TSCS supported the hypothesis of a positive response tendency for the high DP group. Results for the behavioral performance measures and subscales of the TSCS did not support the hypothesis that the response tendency was motivated by denial. Implications were discussed for future research on the self-concept of older persons.

Elevated Self-Concept in the Elderly: Denial or Coping Strategy?

For a number of years conventional wisdom held that a person's self-concept becomes more negative with increasing age. However, recent reviews of the empirical literature on the self-concept of older persons have suggested that this may not always be true. Nehrke, Hulicka and Morgana (1980) state that virtually any directional hypothesis can be supported with respect to age differences in self-concept. The hypothesis of a decrement with age, while supported by some studies, is certainly not a consistent finding. Interestingly, if only carefully conducted studies which used instruments of proven reliability and validity are included in the literature review, then the emerging conclusion is exactly opposite the conventional wisdom. That is, under those conditions the literature is surprisingly consistent in finding the self-concepts of older persons to be higher than either the test norms (Savage, Graber, Britten, Bolton, & Cooper, 1970; Postema, 1970; Trimakas & Nicolay, 1974; Thompson, 1972; Wilson & May (cited in Thompson, 1972)) or younger groups of research participants (Grant, 1967; Hess & Bradshaw, 1970; Nehrke, Hulika & Morgana, 1980). In addition, within a group of older person (age range: 55-86) Crandall (1975) found that self-concept scores tended to increase with age (although the increase failed to reach significance). The only counter findings were by Mason (1954) and Kogan and Wallach (1961) who found lower self-concept scores in their samples of older persons. After reviewing the empirical literature on

psychological factors in older persons, Thomae (1980) concluded that research findings do not generally confirm the existence of negative self-concepts in the elderly.

A conceptual clarification is necessary at this point. George and Bearon (1980) make a distinction between self-concept and self-esteem. They define self-concept as the individual's perceptions of him or her self as an object of observation. Self-esteem they define as the evaluations and affective judgments emerging from comparisons with others. This distinction is an important one in that separate instruments are used to measure self-esteem and self-concept while the concepts have been used interchangeably by some authors. Secondly, the literature on self-esteem has shown that the majority of studies on self-esteem have found no age differences in that construct (George & Bearon, 1980).

Connected to these issues is a potentially very important issue in gerontology. This is the use of denial as a defense mechanism in older persons. Carp (1975) found a significant increase in the denial of environmental realities with an older sample. The use of denial has also been suggested in studies of the self-concepts of older persons (Grant, 1967; Postema, 1970; Thomae, 1980; Thomae, Mathey & Knorr, 1977 (cited in Thomae, 1980); Weisman & Hackett, 1967). These findings have led some investigators to suggest that the elevated self-concept scores found in older samples may be the result of a response tendency which is motivated by denial (Grant, 1967; Postema, 1970;

Pfiffer, 1977). The self-concept scores as reported would not be, therefore, an accurate index of the person's real self-concept. However, other researchers (Savage, et al., 1977; Timakas & Nicolay, 1974) have suggested that denial may in fact reflect a positive reaction which leads to a better adjustment in later life. This second argument says that denial may in fact be a coping strategy which reflects a decision to classify the negative contingencies of old age as less important aspects of one's self-concept.

Two issues are raised by these findings. First, if denial were consistently used by older persons, then any self-report measure administered to older samples may be subject to the same response tendency. Under those circumstances the results of any study that used self-report assessment instruments could be suspect. The issue here is the extent of the response tendency across different types of measures. Second, the choice between conceptualizing a response tendency as an indicator of denial or as a positive reaction which can enhance adjustment could have a large impact on theory, research, and intervention strategies. The denial interpretation views the response tendency negatively as a measure of a defense mechanism, while the second interpretation views it positively as an effective coping strategy. This paper investigated both the issues of: (1) consistency vs. specificity of response tendency and (2) response tendency as a defense mechanism vs. an effective coping strategy.

Method

Subjects

The research participants for this paper were taken from a previous study of effective functioning in older persons (Norris, Seeman, Compton, Adkins & Leftwich, 1983). Participants were recruited in three ways: (1) an investigator described the research on a local radio show and asked interested persons to call a given number, (2) a local senior citizens center was addressed and issued the same invitation, and (3) a request for volunteers was placed on the bulletin board of a high-rise apartment unit for older men and women. Persons who volunteered were administered the Physical Health Spectrum (Belloc, Breslow, & Hochim, 1971) in order to assess health status. Only those persons who reported no major health problems were included in the study.

A total sample of seven men and 24 women between 65 and 90 years of age (M = 73 58, SD = 6.71) was obtained from people living in the community (n = 17) and people living in the high-rise apartment unit (n = 14). They were consistently highly educated (M = 15.67 years, SD = 2.78) with a median income of $16,875 per year. In marital status, 13% had never married, 35% were married and living with their spouses, 39% were widowed, and 13% were divorced. All were white and living in an urban setting.

Materials

The test battery that was given yielded 66 scores. A complete description of the measures can be found in Norris, Seeman, Compton, Adkins and Leftwich (1983). A brief listing and description will be given here of the subsample of measures used in this study. General physical health was assessed with the Health Practices Inventory (Belloc, Breslow & Hochim, 1971). Overall functioning was measured by the OARS Multidimentional Functional Assessment Questionnaire (MFAQ) (Laurie, 1977). The MFAQ contains subscales which measure social, economic, mental, and physical domains as well as activities of daily living. Quality of life was measured with an instrument based on life components identified by Flannagan (1978) and developed by Norris and Carter (1984). The Tennessee Self-Concept Scale (Fitts, 1965) measured self-concept. Locus of control was measured by the Tiffany Experienced Control Scale (Tiffany, Salkin & Cowan, 1970). The Tiffany measures experienced control rather than expectancies for control as does the Rotter I-E Scale. Social support was measured by the Pattison Psychosocial Kinship Inventory (Pattison, et al., 1975). The Pattison scale contains a number of potential scorings of a person's social network. These include: number of persons in the network, attitudes toward persons in the network, and positive or negative ratings of persons in the network. A self-management score was derived from the Parks Mazes (Fitts, Parks & Larson, 1982). This instrument contains nine complex mazes which the respondent must

traverse as quickly and as accurately as possible. The Parks Mazes was considered a measure of behavioral performance on a complex task. Other measures of behavioral performance were: auditory and visual reaction time, pulse and respiration change after mild exersise, and Stroop Ratio scores (Thurston, 1944). The Thurston modification of the Stroop ratio is a test of perceptual distractability involving a mismatch between the written word for a color and the color of ink in which the word is written.

Procedure

The community residents were all tested on an individual basis on a university campus. Participants were tested on two separate days one week apart. The apartment residents were given all of the self-report measures except the TSCS in group settings and the remaining measures on an individual basis. The apartment residents were given a test battery which contained fewer measures than the community residents had taken. Preliminary analysis of the community sample data had suggested that some of the original measures were not appropriate for this population and were dropped from the test battery.

Results

The principal evidence for denial in older samples in previous research has been elevated scores on the Defensive Positive (DP) subscale of the TSCS (Fitts, 1965). As in the earlier research, the mean score of this sample was significantly higher on the DP subscale than the norm sample ($t(655) = 1.80, p < .05$).

In order to test the hypotheses of this study, the total sample was divided at the median of the DP scale of the TSCS. Those above the median were considered the high defensive group and those below the median were considered the low defensive group. In order to test the hypothesis of consistency of reponse tendency, t-tests were computed between the DP contrast groups on all of the self-report measures in the test battery that might reasonably be subject to distortion by a response tendency. The self-concept scores from the TSCS could not be included in the analyses because they were all significantly correlated with the DP scale used to define the two groups. Table 1 presents the group means, standard deviations and t scores of all self-report measures used to test this hypothesis. Because the samples were small and somewhat variable, the probability of falsely accepting the null hypothesis was fairly high. For this reason, the level of significance was set at .10. Results showed that the high DP group scored significantly higher than the low DP group on 40% of the measures (i.e. 8 out of 20).

Insert Table 1.
about here

Since 7 of the 8 significant differences showed a more favorable, or better adjusted, score for the high DP group, this result was tested using a binomial distribution with .10 as the probability of success (i.e. a favorable difference). A one-tailed test was

used since theory suggested that the mean for the high DP group should be greater than the low DP mean. The null hypothesis of no response tendency was rejected ($p(r > 7) < .03$). In addition, a sign test for the differences between groups on all 20 measures showed that 15 measures were favorable to the high DP group ($p < .03$). A third test of this hypothesis involved other subscales of the TSCS. The True/False ratio of the TSCS is the ratio of "true" response to "false" responses. A high score on this scale indicates a tendency to answer "true" no matter what the question asks (i.e. a measure of response bias or response tendency). On this scale of the TSCS while the high DP group was higher than the low DP group, the difference was not significant ($t(29) = 1.39, p < .18$). The hypothesis of a "true" response tendency was not supported. Therefore, the hypothesis of no response tendency was rejected for the 20 self-report measures, but not rejected for the TSCS. This suggests that the high DP group was selective in its response tendency. Apparently, they did not answer "true" or "false" regardless of the content of the question, but did tend to give more affirmative answers to the questions. That is, their mode of self-presentation was selective in a more positive direction than the low DP group.

To test the hypothesis that the response tendency is an example of denial as opposed to a coping mechanism, t-tests were computed between the high and low DP groups on all the performance measures in the test battery. It was reasoned that if denial were operating, then there should be significant

differences between the high and low DP groups on measures of behavioral performance. That is, if the high DP group were denying their shortcomings on self-report measures, their behavioral measures of performance should produce lower scores for the high DP group. The performance measures used were: auditory and visual reaction time, pulse change and respiration change after mild exersise, Stroop Ratio scores, and Self-Management scores on the Parks Mazes. There were no significant differences at the .10 level between means for high and low DP groups on any of these measures.

Insert Table 2.
about here

The sign test for the number of favorable differences between the groups also was not significant ($p(r > 3) < .70$). Therefore, it appeared that the high DP group was not denying decrements in behavioral performance compared to the low DP group.

The denial hypothesis was tested a second time by using scales on the TSCS which measure Net Conflict and Total Conflict. The Net Conflict scale measures the extent to which responses to positive items are different from the responses to negative items. Fitts (1965) states that this scale measures two different types of denial. Positive scores on this scale indicate overaffirmation of positive attributes while negative scores indicate the opposite. The Total Conflict scale is a

measure of conflict regardless of the direction of that conflict. High scores on this scale indicate confusion, contradiction and general conflict in self perception. There were no significant differences between the groups on either the Net Conflict scale ($t(21.67) = 1.37, p<.19$) or the Total Conflict scale ($t(22.15) = -1.62, p<.12$). The hypothesis of response tendency as an indicator of denial was not supported with either of the tests.

While the hypothesis of a consistent favorable response tendency for high DP individuals was supported, the use of denial in test responses could not be supported. However, many of the tests involved failing to reject the denial hypothesis rather than supporting the coping alternative. Therefore, further evidence was sought to support the conclusion that the high DP response tendency is an example of a coping strategy rather than a defense mechanism. It was reasoned that if the response tendency is used as an effective coping strategy and the high and low DP groups differ significantly, the differences should be in a direction that would indicate better adjustment. The TSCS subscale Number of Deviant signs (NDS) is an empirically derived subscale which has been found to be that instrument's best index of psychological disturbance. Fitts (1965) reports that this scale alone identifies deviant individuals with 80% accuracy. The high DP group mean was significantly lower than the low group's on the NDS scale at the .10 alpha level ($t(19.80) = -2.02, p<.06$). Interestingly, the variances between the two groups also were significantly different with the high DP group

having a smaller variance ($F(15,14) = 4.37, p<.01$). This seems to indicate that the high DP group was less deviant and also more consistent in their NDS scores than the low DP group.

Subscales of the Tiffany EC Scale also revealed some interesting differences between the high and low DP groups. The high DP group scored significantly lower than the low DP group on the subscales that measure experienced control both From Internal sources ($t(23.81) = -3.63, p<.01$) and From External sources ($t(28.90) = -4.26, p<.01$). Tiffany, Salkin and Cowan (1970) state that these scales represent control experienced in response to organismic or environmental forces (i.e. non self-determined behavior). Low scores on these scales would be characteristic of persons with an internal locus of control as measured by Rotter's I-E Scale. There were no significant differences between the groups on the subscales which measured both experienced control Over Internal and Over External sources. These subscales measure regulation of behavior by personal initiative or choice. These results seem to imply that both groups felt equally competent to control internal and external sources of stress that were present, but that the high DP group experienced organismic and environmental forces to be less threatening or less powerful. At this point it is interesting to remember that the persons in this sample were all independently functioning older persons whose median income was fairly high. There were no significant diferences between the groups on age, income, type of residence, or sex. It would be possible to assume that the external

contingencies were approximately equal for the high and the low DP groups. The significant differences between the groups on the Tiffany subscales suggests that if the high DP group were using more successful coping strategies, then they were using coping strategies which reduced the threat value of organismic and environmental forces. Palmore (1982) found a similar relationship in his study of factors that predict longevity. He found that a person's subjective rating of health was a stronger predictor of longevity than objective ratings. He stated that, "It may be that persons who learn to compensate and to minimize health impairments live longer than those who do not" (Palmore, 1982, p.517).

Discussion

As interesting as the results of this study are, methodological limitations need to be addressed. First, the sample size is fairly small and the power of the tests is not as high as it would be for larger samples. Secondly, there may be a problem with using a median split to define the two groups. Those subjects in the middle third of the distribution may be fairly similar and yet be placed into different groups based on the split at the median. Finally, while the tests of the denial vs. coping strategy hypothesis were intriguing, the use of an existing data base did not allow for a direct test of the denial-coping hypothesis. Futher research into this question should design the study to fit that precise question. It should be noted also that the sample used in this study was effectively

functioning older persons. Results obtained with less healthy or less adjusted older persons may be quite different. For instance, while Carp (1975) and Thomae (1980) found evidence of denial in older samples, the foci of denial were environmental realities (e.g. housing conditions and traffic problems). By contrast, the present sample consisted of older persons who were financially comfortable, physically healthy, and alert; the denial hypothesis was not supported for such a population. This suggests that future research may wish to investigate the relationships between socio-economic status and denial.

In summary, the results of this study support the hypothesis of a consistent favorable response tendency on self-report measures by older persons. However, the results do not support the hypothesis that the response tendency is an indication of the use of denial as a defense mechanism in older persons. In fact, the results suggest that the favorable response tendency is an indication of the use of specific coping strategies which may increase adjustment by reducing the threat value of organismic and environmental forces.

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Table 1

Self-Report instrument means, standard deviations and t values for the high and low Defensive Positive groups

Measure	High DP	Low DP	t
Pattison subscales:			
Kind of Thoughts & Feelings Toward Persons in Social Network	3.81 (0.74)	4.26 (0.49)	-2.01 **
Degree Person Provides Emotional Support	3.56 (0.84)	3.41 (0.62)	0.56
Kind of Thoughts & Feelings Person has Toward You	3.97 (0.70)	3.84 (0.63)	0.57
Strength of Feelings Person has Toward You	3.87 (0.51)	3.86 (0.56)	0.04
Percentage of Positive relations in social network	70.28 (16.04)	68.54 (17.50)	0.29
Percentage of Negative relations in social network	9.03 (11.12)	6.90 (5.71)	0.67
Percentage of Indifferent relations in social network	17.10 (8.75)	25.08 (14.31)	-1.89 **
Tiffany Experienced Control Scale:			
Internal Ratio	1.48 (0.63)	1.00 (0.15)	2.98 **
External Ratio	1.62 (0.62)	1.05 (0.20)	3.51 **
Quality of Life subscales:			
Leisure	80.50 (23.70)	81.47 (16.82)	-0.13
Personal Development	65.88 (13.24)	59.27 (10.85)	1.51 *

Helping Others	29.06 (9.10)	27.60 (7.92)	0.48
Family	25.44 (13.50)	27.27 (9.08)	-0.44
Friends	35.94 (7.51)	33.60 (9.09)	0.78
OARS Functional Assessment:			
Social Functioning	5.44 (0.57)	4.50 (0.90)	3.76 **
Mental Health	5.19 (0.70)	4.73 (0.94)	1.53 *
Physical Health Spectrum			
How often are you compltely worn out at the end of the day?	2.13 (0.50)	2.00 (0.38)	0.78
When you have only 4 or 5 hours of sleep during the night, how tired do you feel the next day?	2.00 (0.73)	2.13 (0.83)	-0.47
How often do you have any trouble getting to sleep or staying awake?	2.38 (0.62)	2.07 (0.70)	1.30
Would you say you have more or less energy than most people your age?	2.94 (0.25)	2.53 (0.74)	2.00 **

Note: Standard deviations for the groups are in parentheses below the means.

a. df = 22; b. df = 16; c. df = 18; d. df = 19; e. df = 16; all others df = 29

* $p<.10$ ** $p<.05$ (one-tailed)

Table 2

Performance instrument means, standard deviations and t values for the high and low Defensive Positive groups

Measure	High DP	Low DP	t *
Reaction Time			
Auditory	0.30 (0.22)	0.22 (0.09)	1.27
Visual	0.27 (0.09)	0.25 (0.09)	0.51
Pulse change after mild exercise	7.81 (5.17)	9.80 (6.26)	-0.97
Respiration change after mild exercise	1.68 (2.92)	2.67 (2.77)	-0.96
Stroop Ratio	0.61 (0.19)	0.55 (0.11)	1.06
Parks Mazes	434.13 (54.60)	435.73 (42.56)	-0.09

Note: Standard deviations for the groups are in parentheses below the means.

a. df = 20; b. df = 24; all others df = 29

* all t values non significant